What is claimed is:

1. In an optical transceiver having at least two photodetectors and at least two laser transmitters, a method of minimizing a risk of damage to human tissue, caused by an exposure to an amount of laser radiation in excess of a maximum permissible exposure level, the method comprising:

monitoring at least one of the photodetectors for receipt of an optical data signal;

determining, using a controller, if a received optical data signal satisfies at least one expected activity criterion; and,

if the received optical data signal does not satisfy the at least one expected activity criterion, determining that an eye safety fault condition exists and causing a shut down of at least one of the at least two laser transmitters.

2. The method of claim 1 wherein the determining further comprises comparing the optical data signal to an expected signal.

3. The method of claim 1 wherein the received optical data signal comprises a predetermined pattern.

4. The method if claim 3 wherein the received optical data signal comprises a clock.

5. The method of claim 1 wherein the monitoring is on a window of time basis.

6. The method of claim 5 wherein the determining occurs for a window of time.

7. The method of claim 1 wherein the causing the shut down further comprises:

triggering a cascading shut down.

8. The method of claim 1 further comprising:

determining that the eye safety fault condition has been corrected, and

automatically turning on at least one shut down transmitter.

9. The method of claim 8 further comprising:

monitoring a photodetector for post fault activity;

determining whether the post fault activity is valid; and

automatically turning on at least one shut down transmitter when the post fault activity is valid.

10. The method of claim 1 further comprising:

after the shut down, cycling through the shut down laser transmitters.

11. A method of providing for eye safety with an optical transceiver having multiple laser transmitters and optical receivers, the method comprising:

associating at least two of the multiple laser transmitters with an eye safety receiver channel;

monitoring the eye safety receiver channel for the presence of a received eye safety signal, and

if the eye safety signal ceases to be present, shutting down at least one of the at least two laser transmitters associated with the eye safety receiver channel.

12. The method of claim 11 wherein the associating further comprises logically grouping the at least two laser transmitters.

13. The method of claim 11 wherein the associating further comprises physically grouping the at least two laser transmitters.

14. The method of claim 11 further comprising:

partitioning the multiple lasers.

15. The method of claim 14 wherein the partitioning is based upon a maximum permissible exposure level.

16. The method of claim 11 further comprising:

comparing the received eye safety signal with an expected signal.

17. The method of claim 11 further comprising:

sending a known signal using one of the at least two laser transmitters.

18. The method of claim 17 wherein the received eye safety signal is the known signal.

19. A method of controlling emission of laser radiation from an optical transceiver having multiple transmit channels comprising:

transmitting data over a first transmit channel of the optical transceiver;

transmitting an eye safety signal over second transmit channel of the optical transceiver;

monitoring a dedicated receiver channel of the optical transceiver for an expected eye safety response signal and, if the monitoring indicates that the expected eye safety response signal is not being received, shutting down at least the first transmit channel.

20. The method of claim 19 further comprising:

partitioning the optical transceiver so that at least some of the multiple transmit channels are in a first partition and others of the multiple transmit channels are in a second partition.

21. The method of claim 20 wherein the method of claim 1 is only performed in the first partition.

22. An optical transceiver with multiple optical devices comprising:

a transmit channel;

a receiver channel;

an eye safety channel; and

a controller, coupled to the transmit channel and eye safety channel, and configured to receive information based upon a monitoring of the eye safety channel and shut down the transmit channel when the information indicates that an eye safety fault has occurred.

23. The transceiver of claim 22 further comprising:

storage, accessible by the controller, configured to store eye safety data.

24. The transceiver of claim 23 wherein the storage comprises stored eye safety data and the controller is further configured to access the storage and compare the received information to the stored eye safety data.

25. An optical communication system comprising:

a group of optical fibers, having first ends, second ends, and lengths in between;

a first transceiver coupled to a first end of a first optical fiber, the first transceiver having at least one laser transmitter and at least one eye safety receiver coupled to a first end of a second optical fiber; and

a second transceiver coupled to the second end of the first optical fiber,

the first transceiver being controlled such that, when a laser transmitter is transmitting to the second transceiver over the first optical fiber and a specified condition, indicative of an eye safety fault, is detected by the at least one eye safety receiver, the first transceiver will turn off the laser transmitter.

26. The optical communication system of claim 25 wherein the second transceiver is coupled to a second end of the second optical fiber, and the second transceiver is configured to loop back a signal to the first transceiver via a second optical fiber.

27. The optical communication system of claim 25 wherein the specified condition is transitions within a window of time.

28. The optical communication system of claim 25 wherein the specified condition is a pattern mismatch.

29. The optical communication system of claim 25 wherein the specified condition is a loss of a clock signal embedded in a data signal.

30. The optical communication system of claim 25 further comprising:

an interface on the first transceiver through which the specified condition can be controlled.

31. An optical transceiver module, having an optical input and an optical output, comprising:

a transmission portion, comprising at least two transmitters,

a receiver portion, comprising at least two receivers, and

a controller, connected to the transmission portion and receiver portion, and constructed to

i) cause a specified data pattern to be sent by a first transmitter out of the optical output when a second of the at least two transmitters is active; and

ii) monitor at least one receiver to detect valid activity and, if the valid activity is not detected, render at least the second transmitter inactive.

32. The optical transceiver module of claim 31 wherein the transmission portion comprises at least two partitions.

33. The optical transceiver module of claim 32 wherein at least one of the at least two partitions are based upon a physical association.

34. The optical transceiver module of claim 32 wherein at least one of the at least two partitions are based upon a logical association.

35. The optical transceiver module of claim 31 wherein the receiver portion comprises at least two partitions.

36. The optical transceiver module of claim 35 wherein at least one of the at least two partitions are based upon a physical association.

37. The optical transceiver module of claim 35 wherein at least one of the at least two partitions are based upon a logical association.

38. The optical transceiver module of claim 31 wherein the controller is coupled to at least one of the transmitter portion or the receiver portion the via an external interface.

39. A method of providing for eye safety in an optical transceiver having transmitters and receivers, the method comprising:

transmitting a first eye safety signal, using one transmitter in the transceiver, when at least one other data transmitter is active;

monitoring an eye safety receiver, in the optical transceiver, for an eye safety fault condition;

determining, based upon a result of the monitoring, that the eye safety fault condition has occurred; and

deactivating the at least one other data transmitter in response to the determining.

40. An optical transceiver comprising:

at least two partitions, each of the at least two partitions comprising at least two optical devices; and

an activity monitoring unit, coupled to at least one optical device in at least one partition, the activity monitoring unit being constructed to monitor the at least one optical device for data activity and issue a signal when no data activity has occurred for a specified period of time.

41. The optical transceiver of claim 40 wherein the activity monitoring unit comprises activity monitoring circuitry.

42. The optical transceiver of claim 40 wherein the activity monitoring unit comprises a processor.

43. The optical transceiver of claim 40 wherein the activity monitoring unit comprises a state machine.

44. A method of performed in a optical communication system comprising at least two transmitters and at least two receivers, the method comprising:

determining that a optical fiber fault has occurred based upon a monitoring of one of the at least two receivers;

shutting down one of the at least two transmitters in response to the optical fiber fault;

detecting that the one of the at least two transmitters has been shut down; and

in response to the detecting, shutting down the other of the at least two transmitters.

45. A method performed in an optical communication system comprising multiple transmitters and multiple receivers, at least some of the multiple transmitters and multiple receivers being coupled to each other by optical fibers, the method comprising:

determining that an optical fiber fault has occurred on at least one of the optical fibers;

shutting down some of the transmitters based upon the determining; and

selectively turning on, and sending a signal out of, at least one of the shut down transmitters until a receiver receives the signal.

46. The method of claim 45 further comprising:

cycling through a turn on of, and data transmission from, other transmitters; and

monitoring for receipt of the data transmission at receivers coupled to the other transmitters.

47. The method of claim 46 further comprising:

leaving a cycled through transmitter on when a result of the monitoring indicates that that a no-fault condition exists for the optical fiber to which the cycled through transmitter is coupled.

48. The method of claim 46 further comprising:

shutting down a cycled through transmitter when a result of the monitoring indicates that that an optical fiber fault condition still exists for the optical fiber to which the cycled through transmitter is coupled.

49. In an optical transceiver system, a method comprising:

cycling through a turning on of shut down transmitters, the transmitters having been shut down due to a fault condition;

determining whether a no fault condition exists for each shut down transmitter; and

if the no fault condition exists for a particular transmitter, making the particular transmitter an active transmitter, and if the no fault condition does not exist, shutting down the particular transmitter.